

Unit Planning Guide: Grade 1 Unit 2 of 4

Unit Title: Addition and Subtraction	Pacing (Duration of Unit): 10 weeks
Grade: 1	Buffer Day(s): 2

Desired Results

Transfer Goals (Priority practice standards in **bold**)

Students will be able to independently use their learning to:

- MP.1. **Make sense of problems and persevere in solving them.**
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. **Model with mathematics.**
- MP.5. **Use appropriate tools strategically.**
- MP.6. **Attend to precision.**
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

Prerequisite Standards:

- **K.CC.1:** Count to 100 by ones and by tens.
- **K.OA.2:** Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Standards (Priority Standards in **bold**):

- **1.NBT.1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.**
- 1.NBT.2: Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
 - 1.NBT.2a: 10 can be thought of as a bundle of ten ones—called a “ten.”

WIDA for English Language Learners

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting

Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

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- 1.NBT.2b: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
 - 1.NBT.2c: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
- 1.NBT.3: Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
- **1.OA.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.⁹**
- 1.OA.2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- 1.OA.6: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
- **1.OA.7: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6=6$, $7=8-1$, $5+2=2+5$, $4+1=5+2$.**
- **1.OA.8: Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = - 3$, $6 + 6 =$.**
- **1.OA.MA.9: Write and solve number sentences from problem situations that express relationships involving addition and subtraction within 20.**
- 1.MD.MA.5: *Introduce (Mastery in 4th quarter)* Identify the values of all U.S. coins and know their comparative values (e.g., a dime is of greater value than a nickel). Find equivalent values (e.g., a nickel is equivalent to 5 pennies). Use appropriate notation (e.g., 69¢). Use the values of coins in the solutions of problems.

Meaning (*Mostly assessed through Performance Tasks/Assessments)

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Big Ideas: (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)

- The equal sign in a number sentence indicates that the quantity to the left is equivalent in value to the quantity on the right.
- Problems in the real world can be represented and solved with an addition or subtraction sentence.
- Counting goes on and on forever; you can always get to a higher number by counting.
- Where you put the digits in a number when you write it tells you how big the number is. Knowing this helps you add and subtract.
- Number relationships can be used to solve addition and subtraction problems.

Essential Questions: (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)

- What strategies can you use to solve addition and subtraction problems?
- Why not always count by 1?
- How big is 100?

Acquisition (*Mostly assessed through traditional summative assessments)

Knowledge: Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

Students will know ...

- How addition and subtraction are related.
- Equation and inequality symbols (<, >, =) and their meanings
- Coins and their values (penny, nickel, dime)
- Academic Vocabulary – place value, model, coins (quarter, nickel, dime, penny)

Skills: The discrete skills and process students should be able to use independently.

Students will be skilled at:

- Composing numbers by modeling with manipulatives. (Applying)
- Counting to 120 starting at any number less than 120. (Remember)
- Comparing 2-digit numbers. (Understanding)
- Making models to solve word problems with up to three addends. (Applying)
- Adding and subtraction within 20. (Fluently within 10) (Applying)
- Modeling “taking from”, “taking apart”, “putting together”, and comparing numbers with unknowns. (Applying)
- Identifying coins and their values (Remember)

Resource Suggestions:

The Very Hungry Caterpillar, Eric Carle

Illustrative Mathematics task: <http://www.illustrativemathematics.org/illustrations/1150>

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Ten-frames

Markers, unifix cubes, or counters